

HLA COMPLIANCE CHECKLIST 1.0

FEDERATE

25 September 1996

Compliance Item 1: The federate shall have an HLA Simulation Object Model (SOM), documented in accordance with the HLA Object Model Template (OMT).

Supporting Documentation

HLA Rules [7]

Object Model Template [2]

Object Model Template Extensions [3]

Test Procedures for the Object Model Template [5]

Tests * indicates mandatory tables

Object Class Structures*

Object Interactions*

Attributes and Parameters*

Enumerated Data Types

Complex Data Types

Lexicon*

Component Structures

Associations

Object Model Metadata.

Compliance Item 2: Federates shall be able to update and/or reflect any attributes of objects in their SOM and send and/or receive SOM object interactions externally, as specified in their SOM.

Supporting Documentation

HLA Rules [7]

Interface Specification [1]

Test Procedures for the Interface Specification [4]

Comments

Exhaustive testing is not required

Test ensures that needed underlying structural functionality is present

The accuracy of data detailed in the SOM is not a matter of HLA compliance

Tests * indicates mandatory services † RTI-initiated service; federate must accept service invocation.

Subscribe Object Class*

Subscribe Object Attribute*

Subscribe Interaction Class*

Publish Object Class*

Publish Interaction Class*

Control Updates †*

Control Interactions †*

Update Attribute Values*

Reflect Attribute Values †*

Send Interaction*

Receive Interaction †*

Request Attribute Value Update

Provide Attribute Value Update †*

Retract

Reflect Retraction †*

Compliance Item 3: Federates shall be able to transfer and/or accept ownership of attributes dynamically during a federation execution, as specified in their SOM.

Supporting Documentation

HLA Rules [7]

Interface Specification [1]

Test Procedures for the Interface Specification [4]

Comments

Exhaustive testing is not required

Test ensures that needed underlying structural functionality is present

The accuracy of data detailed in the SOM is not a matter of HLA compliance

Tests * indicates mandatory services † RTI-initiated service; federate must accept service invocation.

Request Attribute Ownership Acquisition

Request Attribute Ownership Assumption †

Attribute Ownership Acquisition Notification †

Request Attribute Ownership Divestiture

Request Attribute Ownership Release †

Attribute Ownership Divestiture Notification †

Query Attribute Ownership

Compliance Item 4: Federates shall be able to vary the conditions (e.g., threshold) under which they provide updates of attributes of objects, as specified in their SOM.

Supporting Documentation

HLA Rules [7]

Interface Specification [1]

Test Procedures for the Interface Specification [4]

Comments

Exhaustive testing is not required

Test ensures that needed underlying structural functionality is present

The accuracy of data detailed in the SOM is not a matter of HLA compliance

Tests * indicates mandatory services † RTI-initiated service; federate must accept service invocation.

Update Attribute Values * (bounded by the SOM)

Reflect Attribute Values † * (bounded by the SOM)

Compliance Item 5: Federates shall be able to manage local time in a way which will allow them to coordinate data exchange with other members of a federation.

Supporting Documentation

HLA Rules [7]

Interface Specification [1]

Test Procedures for the Interface Specification [4]

Comments

Exhaustive testing is not required; Time Management services should be utilized such that events have the same causal relationship across multiple federated instances of the same federate as they would within a single federate.

Test ensures that needed underlying structural functionality is present

The accuracy of data detailed in the SOM is not a matter of HLA compliance

Tests * indicates mandatory services † RTI-initiated service; federate must accept service invocation.

Request Federation Time

Request Federate Time

Request LBTS

Request Minimum Next Event Time

Request Lookahead

Set Lookahead

Time Advance Request

Time Advance Grant †

Next Event Request

Flush Queue Request

Compliance Item 6: During a federation execution, federates shall interact with the runtime infrastructure (RTI) in accordance with the HLA interface specification.

Supporting Documentation

HLA Rules [7]

Interface Specification [1]

Test Procedures for the Interface Specification [4]

Comments

Exhaustive testing is not required

Test ensures that needed underlying structural functionality is present

The accuracy of data detailed in the SOM is not a matter of HLA compliance

Tests * indicates mandatory services † RTI-initiated service; federate must accept service invocation.

Create Federation Execution*

Destroy Federation Execution*

Join Federation Execution*

Resign Federation Execution*

Request Pause

Initiate Pause †

Pause Achieved

Request Resume

Initiate Resume †

Resume Achieved

Request Federation Save

Initiate Federate Save †

Federate Save Begun

Federate Save Achieved

Request Restore

Initiate Restore †

Restore Achieved

Request ID*
Register Object*
Discover Object †*
Delete Object*
Remove Object †*

HLA COMPLIANCE CHECKLIST FEDERATION

Compliance Item 1: Federations shall have an HLA Federation Object Model (FOM), documented in accordance with the HLA Object Model Template (OMT).

Supporting Documentation

HLA Rules [7]

Object Model Template [2]

Object Model Template Extensions [3]

Test Procedures for the Object Model Template [5]

Tests * indicates mandatory tables

Object Class Structures*

Object Interactions*

Attributes and Parameters*

Enumerated Data Types

Complex Data Types

Lexicon*

Component Structures

Associations

Object Model Metadata.

Compliance Item 2: In a federation, all object representation shall be in the federates, not in the Run Time Infrastructure (RTI).

Supporting Documentation

HLA Rules [7]

Comments

Review federation design/enforced by RTI

Compliance Item 3: During a federation execution, all of FOM data interchanged among federates occurs via the RTI.

Supporting Documentation

HLA Rules [7]

Comments

Review federation design/operations

Compliance Item 4: During a federation execution, federates shall interact with the RTI in accordance with the HLA interface specification.

Supporting Documentation

HLA Rules [7]

Interface Specification [1]

Test Procedures for the Interface Specification [4]

Comments

Test all federates for compliance with interface specification

No added testing is needed if all federates in federation are HLA-compliant

Compliance Item 5: During a federation execution, an attribute of an instance of an object shall be owned by only one federate at any given time.

Supporting Documentation

HLA Rules [7]

Interface Specification [1]

Test Procedures for the Interface Specification [4]

Comments

Review federation design

HLA COMPLIANCE CHECKLIST RUNTIME INFRASTRUCTURE

Compliance Item 1: During a federation execution, the Run Time Infrastructure (RTI) shall interact with federates in accordance with the HLA interface specification.

Supporting Documentation

HLA Rules [7]

Interface Specification [1]

Test Procedures for the Interface Specification [4]

Comments

Test RTI federate interfaces for all services given in the Interface Specification

Compliance Item 2: RTI shall provide services as called for by the federates via the interface in accordance with the RTI functional specification

Supporting Documentation

HLA Rules [7]

Run Time Infrastructure Functional Specification [6]

Comments

Test RTI for compliance with RTI functional specification (in draft)

Compliance Item 3: In a federation, all object representation in the FOM shall be in the Federates, not in the RTI.

Supporting Documentation

HLA Rules [7]

Comments

Review RTI design.

Compliance Item 4: During a federation execution, the RTI shall enforce the fact that an attribute of an instance of an object can be owned by only one federate at any given time.

Supporting Documentation

HLA Rules [7]

Interface Specification [1]

Test Procedures for the Interface Specification [4]

Comments

Test via Query Attribute Ownership service.

Review RTI design.